

attention is directed to the description of Figs. 6 and 7 in the Brief Description of Drawings which states that the views show two individual or metal layers, for example, of copper for the capillary area (Fig. 6) and the vapor channel area (Fig. 7). Likewise, Fig. 9 shows the capillary area and Fig. 10 shows the vapor channel area. Also, Fig. 9 refers to the two stacked metal layers of Figs. 11 and 12. Moreover, Fig. 13 describes a capillary formed by two successive metal layers of Figs. 11 and 12, and Figs. 14, 15 and 16 are representative of the foregoing Figs. 11, 12 and 13 but showing the vapor channel area.

Also, on page 6, lines 3-10, it is stated that capillary structures 8 are formed through metal layers 12 and vapor structures 9 are formed through metal layers 13. It is also stated that on the same page, line 14-15, "to form the capillary structures 8 metal layers 12A and 12B are used". On page 6, lines 20-21, it is stated that for the vapor channel structures 9 there are metal layers 13A and 13B. There seems no basis for the Examiner's contention that there is no written description of a plurality of plates having openings and at least two metal layers forming the capillary and at least one other layer forming a vapor structure. The specification is replete with references to the metal layers that form the capillary structure and the metal layers forming the vapor channel area.

The Examiner also objected to the drawings as not including reference number 14. By amendment to the specification, reference number 14 has been deleted and replaced with the reference numbers 14A and 14B. Also, the Examiner stated that the reference to character 16 was used to designate both an area and post. Reference number 16 appears only in Fig. 5 and points to the post shown by the dotted lines in the figure. Reference number 16 designates posts and there are no references to an area.

The Examiner rejected the claims as being indefinite under 112, second paragraph. The claims have been rewritten to correct errors of antecedence and grammatical incorrectness.

On a substantive note, the Examiner rejected claims 31-35, 43, 47, 49, 51-54, 58 and 61 as being anticipated by Dietzsch. Claims 59 and 60 were rejected as being obvious over Dietzsch. Applicant respectfully traverses this rejection.

Dietzsch discloses a heat energy transfer device with capillary arrangement in a closed cavity for advancing a heat transfer medium in a liquid phase in a first direction and a capillary arrangement disposed in the cavity for advancing the heat transfer medium in a liquid phase in a second direction. The capillary structures 11, 12, 21 and 22 are not formed by plates having openings but by a grid. There are no plates having openings forming continuous post-like or column-like areas extending between a closed top and a closed bottom of the cooler such as the post 16 depicted in Fig. 5 of the application.

The post or column-like areas of the invention have a high thermal conductivity and provide for an improved heat transfer from the exterior to the interior of the cooler or evaporation area 2 or from the inside of the cooler or condensation area 3 to the exterior of the cooler. These areas also provide the cooler with structural integrity, preventing the cooler from expanding when the cooling medium is evaporated under external heat. The capillary areas in the vapor channels of the invention are formed by a plurality of metal plates following one another in a stack and provided with a plurality of openings. Fig. 5 shows such a stack having capillary channel 8 and a vapor channel 9. The vapor channel requires a larger flow diameter than the capillary area. This is accomplished by having openings in the metal layer forming the vapor channel that are bigger than the openings in the layers forming the capillary structure or by providing more openings in the vapor channel.

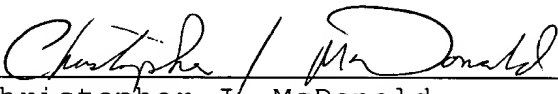
Dietzsch does not disclose metal layers having openings forming the capillary structure and vapor channel, nor does it disclose metal layers with large openings or a greater number of openings to form the vapor channel as compared to the capillary channels. This results in the vapor channel structure having a

larger cross sectional area than the capillary area as is recited in all three independent claims. Dietzsch does not utilize continuous post or column-like areas formed between the top and bottom of the cooler.

The claims pending in the application are allowable over the prior art and such action is eagerly and earnestly solicited. If any issues remain and the Examiner believes that a telephone conversation would resolve such issues, the Examiner is urged to contact the undersigned attorney.

The Commissioner is authorized to charge Deposit Account 08-2455 for any fees that may be due and owing.

Respectfully submitted,

  
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